

Form 1449\*

Atty. Docket No.: 303.648US1

Serial No. 09/484,303

## INFORMATION DISCLOSURE STATEMENT

BY APPLICANT

(Use several sheets if necessary)

Applicant: Kië Y. Ahn et al.

Filing Date: January 18, 2000

Group: 2825

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## U.S. PATENT DOCUMENTS

**Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
<i>NB</i>	2,842,438 ✓	07/08/1958	Saarivirta, M.J., et al.	75	153	08/02/56
<i>NB</i>	3,954,570 ✓	06/04/1976	Shirk, et al.	201	15	11/11/74
<i>NB</i>	4,386,116 ✓	05/31/1983	Nair, et al.	427	99	12/24/81
<i>NB</i>	4,423,547 ✓	01/03/1984	Farrar, P.A., et al.	29	571	06/01/81
<i>NB</i>	4,574,095 ✓	03/04/1986	Baum, et al.	427	53.1	11/19/84
<i>NB</i>	4,762,728 ✓	08/09/1988	Keyser, T., et al.	427	38	11/26/85
<i>NB</i>	4,788,082 ✓	11/29/1988	Schmitt	427	248.1	12/12/85
<i>NB</i>	4,931,410 ✓	06/05/1990	Tokunaga, et al.	437	189	08/25/88
<i>NB</i>	4,962,058 ✓	10/09/1990	Cronin, J.E., et al.	437	187	04/14/89
<i>NB</i>	4,996,584 ✓	02/26/1991	Young, P.L., et al.	357	71	10/13/88
<i>NB</i>	5,019,531 ✓	05/28/1991	Awaya, N., et al.	437	180	05/19/89
<i>NB</i>	5,100,499 ✓	03/31/1992	Douglas, M.A.	156	635	06/25/91
<i>NB</i>	5,130,274 ✓	07/14/1992	Harper, J.M., et al.	437	195	04/05/91
<i>NB</i>	5,158,986 ✓	10/27/1992	Cha, S.W., et al.	521	82	04/05/91
<i>NB</i>	5,173,442 ✓	12/22/1992	Carey, D.H.	437	173	03/24/92
<i>NB</i>	5,240,878 ✓	08/31/1993	Fitzsimmons, J.A., et al.	437	187	04/26/91
<i>NB</i>	5,243,222 ✓	09/07/1993	Harper, J.M., et al.	257	774	01/08/92
<i>NB</i>	5,256,205 ✓	10/26/1993	Schmitt, III, et al.	118	723	01/07/92
<i>NB</i>	5,334,356 ✓	08/02/1994	Baldwin, D.F., et al.	422	133	08/24/92
<i>NB</i>	5,354,712 ✓	10/11/1994	Ho, Y.Q., et al.	437	195	11/12/92
<i>NB</i>	5,426,330 ✓	06/20/1995	Joshi, R.V., et al.	257	752	09/21/93
<i>NB</i>	5,442,237 ✓	08/15/1995	Hughes, H.G., et al.	257	759	02/04/94
<i>NB</i>	5,470,789 ✓	11/28/1995	Misawa, N.	437	190	03/07/95
<i>NB</i>	5,470,801 ✓	11/28/1995	Kapoor, et al.	437	238	06/28/93
<i>NB</i>	5,506,449 ✓	04/09/1996	Nakano, et al.	257	758	03/23/94
<i>NB</i>	5,538,922 ✓	07/23/1996	Cooper, K.J., et al.	437	195	01/25/95
<i>NB</i>	5,635,253 ✓	06/03/1997	Canaperi, et al.	427	437	06/07/95
<i>NB</i>	5,674,787 ✓	10/07/1997	Zhao, et al.	437	230	01/16/96
<i>NB</i>	5,679,608 ✓	10/21/1997	Cheung, et al.	437	195	06/05/95
<i>NB</i>	5,681,441 ✓	10/28/1997	Svendsen, et al.	205	114	12/22/92
<i>NB</i>	5,695,810 ✓	12/09/1997	Dubin, et al.	427	96	11/20/96
<i>NB</i>	5,739,579 ✓	04/14/1998	Chiang, C., et al.	257	635	09/10/96
<i>NB</i>	5,780,358 ✓	07/14/1998	Zhou, M.S.	438	645	04/08/96
<i>NB</i>	5,785,570 ✓	07/28/1998	Bruni, M.D.	445	52	07/25/95
<i>NB</i>	5,792,522 ✓	08/11/1998	Jin, S., et al.	427	575	09/18/96
<i>NB</i>	5,801,098 ✓	09/01/1998	Fiordalice, R., et al.	438	653	09/03/96
<i>NB</i>	5,891,797 ✓	04/06/1999	Farrar, P.A.	438	619	10/20/97
<i>NB</i>	5,891,804 ✓	04/06/1999	Havemann, R.H., et al.	438	674	04/14/97

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*Neal Bererzmy*

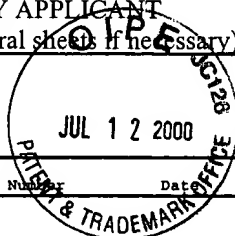
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**Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
<i>NB</i>	5,897,370 ✓	04/27/1999	Joshi, R.V., et al.	438	632	10/28/96
<i>NB</i>	5,911,113 ✓	06/08/1999	Yao, G., et al.	438	649	03/18/97
<i>NB</i>	5,932,928 ✓	08/03/1999	Clampitt, D.A.	257	758	07/03/97
<i>NB</i>	5,972,804 ✓	10/26/1999	Tobin, P.J., et al.	438	786	11/03/97
<i>NB</i>	5,981,350 ✓	11/09/1999	Geusic, J.E., et al.	438	386	05/29/98
<i>NB</i>	5,985,759 ✓	11/16/1999	Kim, E., et al.	438	653	02/24/98
<i>NB</i>	5,994,777 ✓	11/30/1999	Farrar, P.A.	257	758	08/26/98
<i>NB</i>	6,008,117 ✓	12/28/1999	Hong, Q., et al.	438	629	03/19/97
<i>NB</i>	6,030,877 ✓	02/29/2000	Lee, C., et al.	438	381	10/06/97

## FOREIGN PATENT DOCUMENTS

**Examiner Initial	Document Number	Date	Country	Class	Subclass	Translation Yes   No
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## OTHER DOCUMENTS

(Including Author, Title, Date, Pertinent Pages, Etc.)

<i>NB</i>	In: <u>Kirk-Othmer Concise Encyclopedia of Chemical Technology</u> , Grayson, M., (ed.), John Wiley & Sons, Inc., New York, NY, p. 433-435, 926-938, (1985) ✓
<i>NB</i>	In: <u>Metals Handbook, Ninth Edition, Vol. 2, Properties and Selection: Nonferrous Alloys and Pure Metals</u> , ASM Handbook Committee, (eds.), American Society for Metals, Metals Park, OH, 157, 395, (1989) ✓
<i>NB</i>	"Brooks Model 5964 High Performance Metal Seal Mass Flow Controller (Introduced in 1991)", <u>Brooks Instrument</u> , <a href="http://www.frco.com/brooks/semiconductor/products1i.html">http://www.frco.com/brooks/semiconductor/products1i.html</a> , 1 page, (1991) ✓
<i>NB</i>	Abe, K., et al., "Sub-half Micron Copper Interconnects Using Reflow of Sputtered Copper Films", <u>VLSI Multilevel Interconnection Conference</u> , 308-311, (June 25-27, 1995) ✓
<i>NB</i>	Andricacos, P.C., "Copper On-Chip Interconnections", <u>The Electrochemical Society Interface</u> , pp. 32-37, (1999) ✓
<i>NB</i>	Anonymous, "Formation of Conductors at Variable Depths -- Using Differential Photomask, Projecting Images into Insulator by Reactive Ion Etching, Selectively Filling Images with Conductor", <u>Research Disclosure</u> , Disclosure No. RD 291015, Abstract, 1 p., (July 10, 1988) ✓
<i>NB</i>	Anonymous, "Improved Metallurgy for Wiring Very Large Scale Integrated Circuits", <u>International Technology Disclosures</u> , 4, Abstract, 1 page, (1986) ✓

Examiner <i>Neal Berzney</i>	Date Considered <i>3-22-03</i>
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\*\*Examiner  
Initial

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## OTHER DOCUMENTS

(Including Author, Title, Date, Pertinent Pages, Etc.)

NB	Bae, S., et al., "Low-Temperature Deposition Pathways to Silicon Nitride, Amorphous Silicon, Polycrystalline Silicon, and n type Amorphous Silicon Films Using a High Density Plasma System", <u>IEEE Conference Records---Abstracts, International Conference on Plasma Science</u> , pg. 315, (1997) ✓
NB	Bai, G., et al., "Copper Interconnection Deposition Techniques and Integration", <u>1996 Symposium on VLSI Technology, Digest of Technical Papers</u> , 48-49, (1996) ✓
NB	Bernier, M., et al., "Laser processing of palladium for selective electroless copper plating", <u>SPIE, 2045</u> , pp. 330-337, (1994) ✓
NB	Bhansali, S., et al., "A novel technique for fabrication of metallic structures on polyimide by selective electroless copper plating using ion implantation", <u>Thin Solid Films, 270</u> , pp. 489-492, (1995) ✓
NB	Bhansali, S., et al., "Selective electroless copper plating on silicon seeded by copper ion implantation", <u>Thin Solid Films, 253</u> , pp. 391-394, (1994) ✓
NB	Braud, E., et al., "Ultra Thin Diffusion Barriers for Cu Interconnections at The Gigabit Generation and Beyond", <u>VMIC Conference Proceedings</u> , pp. 174-179, (1996) ✓
NB	Cabrera, A.L., et al., "Oxidation protection for a variety of transition metals and copper via surface silicides formed with silane containing atmospheres", <u>J. Mater. Res., 6(1)</u> , pp. 71-79, (1991) ✓
NB	Craig, J.D., "Polyimide Coatings", <u>In: Packaging, Electronic Materials Handbook, Vol. 1</u> , ASM International Handbook Committee (eds.), ASM International, Materials Park, OH, 767-772, (1989) ✓
NB	de Felipe, T.S., et al., "Electrical Stability and Microstructural Evolution in Thin Films of High Conductivity Copper Alloys", <u>IEEE</u> , pp. 293-295, (1999) ✓
NB	Ding, et al., "Copper Barrier, Seed Layer and Planerization Technologies", <u>VMIC Conference Proceedings</u> , pp. 87-92, (1997) ✓
NB	Dubin, V.M., et al., "Selective and Blanket Electroless Copper Deposition for Ultralarge Scale Integration", <u>J. Electrochem. Soc., 144(3)</u> , pp. 898-908, (1997) ✓

Examiner	<i>Neal Berenzny</i>	Date Considered	<i>3-22-03</i>
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## OTHER DOCUMENTS

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NB	Dushman, S., et al., <u>Scientific Foundations of Vacuum Technique</u> , 2nd Edition, John Wiley and Sons, 1-806, (1962) ✓
NB	Edelstein, D., et al., "Full Copper Wiring in a Sub-0.25 micrometer CMOS ULSI Technology", <u>IEDM</u> , pp. 773-776, (1997) ✓
NB	Eldridge, J.M., "New Approaches for Investigating Corrosion in Thin Film Devices", <u>Electronic Packaging and Corrosion in Microelectronics, PROceedings of ASM's Third Conference on Electric Packaging: Materials and Processes &amp; Corrosion in Microelectronics</u> , Mpls, MN, pp. 283-285, (1987) ✓
NB	Ernst, et al., "Growth Model for Metal Films on Oxide Surface: Cu on ZnO(0001)-O", <u>Physical Review B</u> , 47, 13782-13796, (May 15, 1993) ✓
NB	Gladfelter, W.L., et al., "Trimethylamine Complexes of Alane as Precursors for the Low-Pressure Chemical Vapor Deposition of Aluminum", <u>Chemistry of Materials</u> , 1, pp. 339-343, (1989) ✓
NB	Godbey, D.J., et al., "Copper Diffusion in Organic Polymer Resists and Inter-level Dielectrics", <u>Thin Solid Films</u> , 308-309, pp. 470-474, (1997) ✓
NB	Grimblot, J., et al., "II. Oxidation of Al Films", <u>J. Electrochem.</u> , 129, pp. 2369-2372, (1982) ✓
NB	Hattangady, S.V., et al., "Integrated processing of silicon oxynitride films by combined plasma and rapid-thermal processing", <u>J. Vac. Sci. Technol. A</u> , 14(6), pp. 3017-3023, (1996) ✓
NB	Hirao, S., et al., "A Novel Copper Reflow Process Using Dual Wetting Layers", <u>1997 Symposium on VLSI Technology</u> , Digest of Technical Papers, 57-58, (1997) ✓
NB	Hirata, A., et al., "WSiN Diffusion Barrier Formed by ECR Plasma Nitridation for Copper Damascene Interconnection", <u>16th Solid State Devices and Materials</u> , pp. 260-261, (1998) ✓
NB	Holloway, K., et al., "Tantalum as a diffusion barrier between copper and silicon", <u>Appl. Phys. Lett.</u> , 57(17), pp. 1736-1738, (October 1990) ✓
NB	Hu, C.K., et al., "Extendibility of Cu Damascene to 0.1 micrometer Wide Interconnections", <u>Mat. Res. Soc. Symp. Proc.</u> , 514, pp. 287-292, (1998) ✓

Examiner

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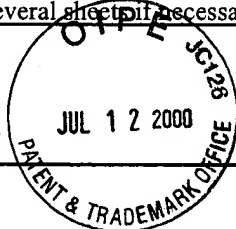
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## OTHER DOCUMENTS

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NB	Hymes, S., et al., "Passivation of Copper by Silicide Formation in Dilute Silane", <u>Conference Proceedings ULSI-VII</u> , pp. 425-431, (1992) ✓
NB	Iijima, T., et al., "Microstructure and Electrical Properties of Amorphous W-Si-N Barrier Layer for Cu Interconnections", <u>1996 VMIC Conference</u> , pp. 168-173, (1996) ✓
NB	Izaki, M., et al., "Characterization of Transparent Zinc Oxide Films Prepared by Electrochemical Reaction", <u>Journal of the Electrochemical Society</u> , 144, 1949-1952, (June 1997) ✓
NB	Jayaraj, K., et al., "Low Dielectric Constant Microcellular Foams", <u>Proceedings from the Seventh Meeting of the DuPont Symposium on Polymides in Microelectronics</u> , pp. 474-501, (September 1996) ✓
NB	Jeon, Y., et al., "Low-Temperature Fabrication of Polycrystalline Silicon Thin Films by ECR Pecvd", <u>The Electrochemical Society Proceedings</u> , 94(35), pp. 103-114, (1995) ✓
NB	Jin, C., et al., "Porous Xerogel Films as Ultra-low Permittivity Dielectrics for ULSI Interconnect Applications", <u>Conference Proceedings ULSI XII - 1997 Materials Research Society</u> , pp. 463-469, (1997) ✓
NB	Kamins, T.I., "Structure and Properties of LPCVD Silicon Films", <u>J. Electrochem. Soc.: Solid-State Science and Technology</u> , 127, pp. 686-690, (March 1980) ✓
NB	Kang, H.K., et al., "Grain Structure and Electromigration Properties of CVD CU Metallization", <u>Proceedings of the 10th International VLSI Multilevel Interconnection Conference</u> , 223-229, (June 8-9, 1993) ✓
NB	Keppner, H., et al., "The "Micromorph" Cell: A New Way to High-Efficiency-Low-Temperature Crystalline Silicon Thin-Film Cell Manufacturing", <u>Mat. Res. Soc. Symp. Proc.</u> , 452, pp. 865-876, (1997) ✓
NB	Kiang, M., et al., "Pd/Si plasma immersion ion implantation for selective electrless copper plating on Sio2", <u>Appl. Phys. Lett.</u> , 60, pp. 2767-2769, (1992) ✓

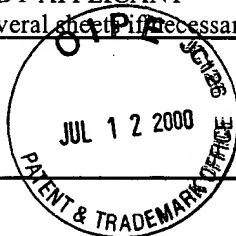
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NB	Kistiakowsky, G.B., et al., "Reactions of Nitrogen Atoms. I. Oxygen and Oxides of Nitrogen", <u>The Journal of Chemical Physics</u> , 27(5), pp. 1141-1149, (1957) ✓
NB	Laursen, T., et al., "Encapsulation of Copper by Nitridation of Cu-Ti Alloy/Bilayer Structures", <u>International Conference on Metallurgical Coatings and Thin Films</u> , Abstract No. H1.03, San Diego, CA, pg. 309, (April 1997) ✓
NB	Len, V., et al., "An investigation into the performance of diffusion barrier materials against copper diffusion using metal-oxide-semiconductor (MOS) capacitor structures", <u>Solid-State Electronics</u> , 43, pp. 1045-1049, (1999) ✓
NB	Lyman, T., et al., "Metallography, Structures and Phase Diagrams", <u>Metals Handbook</u> , 8, American Society for Metals, Metals Park, Ohio, pgs. 300 & 302, (1989) ✓
NB	Marcadal, C., et al., "OMCVD Copper Process for Dual Damascene Metallization", <u>VMIC Conference</u> , ISMIC, pp. 93-97, (1997) ✓
NB	Miller, R.D., et al., "Low Dielectric Constant Polyimides and Polyimide Nanofoams", <u>Seventh Meeting of the DuPont Symposium on Polymides in Microelectronics</u> , pp. 443-473, (September 1996) ✓
NB	Miyake, T., et al., "Atomic Hydrogen Enhanced Reflow of Copper", <u>Applied Physics Letters</u> , 70, 1239-1241, (1997) ✓
NB	Murarka, S.P., et al., "Copper Interconnection Schemes: Elimination of The Need of Diffusion Barrier/Adhesion Promoter by the Use of Corrosion Resistant, Low Resistivity Doped Copper", <u>SPIE</u> , 2335, pp. 80-90, (1994) ✓
NB	Nakao, S., et al., "Thin and Low-Resistivity Tantalum Nitride Diffusion Barrier and Giant-Grain Copper Interconnects for Advanced ULSI Metallization", <u>Japanese Journal of Applied Physics</u> , 38(4B), pgs. 262-263, (April 1999) ✓
NB	Newboe, B., et al., "Applied Materials Announces First Barrier/Seed Layer System For Copper Interconnects", <u>Applied Materials</u> , <a href="http://www.appliedmaterials.com/newsroom/pr-00103.html">http://www.appliedmaterials.com/newsroom/pr-00103.html</a> , pgs. 1-4, (1997) ✓
NB	Okamoto, Y., et al., "Magnetically Excited Plasma Oxynitridation of Si at Room Temperature", <u>Jpn. J. Appl. Phys.</u> , 34, pp. L955-957, (1995) ✓

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NB	Palleau, J., et al., "Refractory Metal Encapsulation in Copper Wiring", <u>Advanced Metallization for Devices and Circuits-Science, Technology and Manufacturability, Materials Research Society Symposium Proceedings, 337</u> , pp. 225 - 231, (April 1994) ✓
NB	Park, C.W., et al., "Activation Energy for Electromigration in Cu Films", <u>Applied Physics Letters, 59(1)</u> , 175-177, (July 6, 1991) ✓
NB	Radzimski, Z.J., et al., "Directional Copper Deposition using d-c Magnetron Self-sputtering", <u>J. Vac. Sci. Technol. B, 16(3)</u> , pp. 1102-1106, (1998) ✓
NB	Ramos, T., et al., "Nanoporous Silica for Dielectric Constant Less Than 2", <u>Conference Proceedings ULSI XII - 1997 Materials Research Society</u> , 455-461, (1997) ✓
NB	Rath, J.K., et al., "Low-Temperature deposition of polycrystalline silicon thin films by hot-wire CVD", <u>Solar Energy Materials and Solar Cells, 48</u> , pp. 269-277, (1997) ✓
NB	Ray, S.K., et al., "Flourine-enhanced nitridation of silicon at low temperatures in a microwave plasma", <u>J. Appl. Phys., 70(3)</u> , pp. 1874-1876, (1991) ✓
NB	Rossnagel, S.M., "Magnetron Sputter Deposition of Interconnect Applications", <u>Conference Proceedings, ULSI XI</u> , 227-232, (1996) ✓
NB	Rossnagel, S.M., et al., "Metal ion deposition from ionized magnetron sputtering discharge", <u>J. Vac. Sci. Technol. B, 12(1)</u> , pp. 449-453, (1994) ✓
NB	Ryan, J.G., et al., "Copper Interconnects for Advanced Logic and DRAM", <u>Extended Abstracts of the 1998 International Conference on Solid-State Devices and Materials, Hiroshima</u> , pp. 258-259, (1998) ✓
NB	Ryu, C., et al., "Barriers for copper interconnections", <u>Solid State Technology</u> , pp. 53,54,56, (April 1999) ✓
NB	Saarivirta, M.J., "High Conductivity Copper Rich Cu-Zr Alloys", <u>Transactions of the Metallurgical Society of AIME</u> , 218, pp. 431-437, (1960) ✓
NB	Senzaki, Y., "Chemical Vapor Deposition of Copper using a New Liquid Precursor with Improved Thermal Stability", <u>Conference Proceedings ULSI XIII, Materials Research Society</u> , pp. 451-455, (1998) ✓

Examiner

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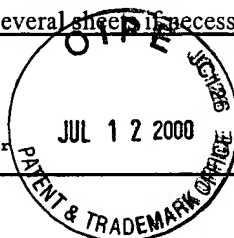
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NB	Shacham-Diamand, Y., "100 nm Wide Copper Lines Made by Selective Electroless Deposition", <u>Journal of Micromechanics and Microengineering</u> , 1, 66-72, (March 1991) ✓
NB	Shacham-Diamond, Y., et al., "Copper electroless deposition technology for ultra-large-scale-integration (ULSI) metallization", <u>Microelectronic Engineering</u> , 33, pp. 47-58, (1997) ✓
NB	Srivatsa, A.R., et al., "Jet Vapor Deposition: an Alternative to Electrodeposition", <u>Surface Engineering</u> , 11, 75-77, (1995) ✓
NB	Tao, J., et al., "Electromigration Characteristics of Copper Interconnects", <u>IEEE Electron Devices Letters</u> , 14, 249-251, (May 1993) ✓
NB	Ting, C.H., "Methods and Needs for Low K Material Research", <u>Materials Research Society Symposium Proceedings, Volume 381</u> , Low-Dielectric Constant Materials -- Synthesis and Applications in Microelectronics, Lu, T.M., et al., (eds.), San Francisco, CA, 3-17, (April 17-19, 1995) ✓
NB	Tsukada, T., et al., "Adhesion of copper films on ABS polymers deposited in an internal magnet magnetron sputtering system", <u>J. Vac. Sci. Technol.</u> , 16(2), pp. 348-351, (1979) ✓
NB	Van Vlack, L.H., <u>Elements of Materials Science</u> , Addison-Wesley Publishing Co., Inc. Reading, MA, pg. 468, (1959) ✓
NB	Venkatesan, S., et al., "A High Performance 1.8V, 0.20 micrometer CMOS Technology with Copper Metalization", <u>IEEE</u> , pp. 769-772, (1997) ✓
NB	Vossen, J.L., et al., <u>Thin Film Processes II</u> , Academic Press, Inc., 1-866, (1991) ✓
NB	Wang, K., et al., "Very Low Temperature Deposition of Polycrystalline Silicon Films with Micro-Meter-Order Grains on SiO <sub>2</sub> ", <u>Mat. Res. Soc. Symp. Proc.</u> , 355, pp. 581-586, (1995) ✓
NB	Wang, X.W., et al., "Highly Reliable Silicon Nitride Thin Films Made by Jet Vapor Deposition", <u>Japanese Journal of Applied Physics</u> , 34, 955-958, (February 1995) ✓

Examiner	Neal Bererny	Date Considered	3-22-03
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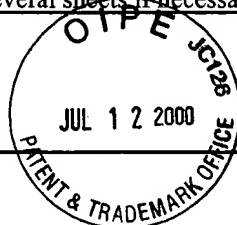
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## OTHER DOCUMENTS

(Including Author, Title, Date, Pertinent Pages, Etc.)

NB	Winters, H.F., et al., "Influence of Surface Absorption Characteristics on Reactivity Sputtered Films Grown in the Biased and Unbiased Modes", <u>J. Appl. Phys.</u> , 43(3), pp. 794-799, (1972) ✓
NB	Wolf, S., et al., <u>Silicon Processing for the VLSI Era, Vol. 1 -- Process Technology</u> , Lattice Press, Sunset Beach, CA, p. 514-538, (1986) ✓
NB	Yeh, J.L., et al., "Selective Copper plating of Polysilicon Surface Micromachined Structures", <u>Solid-State Sensor and Actuator Workshop</u> , pp. 248-251, (1998) ✓
NB	Zhang, J., et al., "Investigations of photo-induced decomposition of palladium acetate for electroless copper plating", <u>Thin Solid Films</u> , 318, pp. 234-238, (1998) ✓

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